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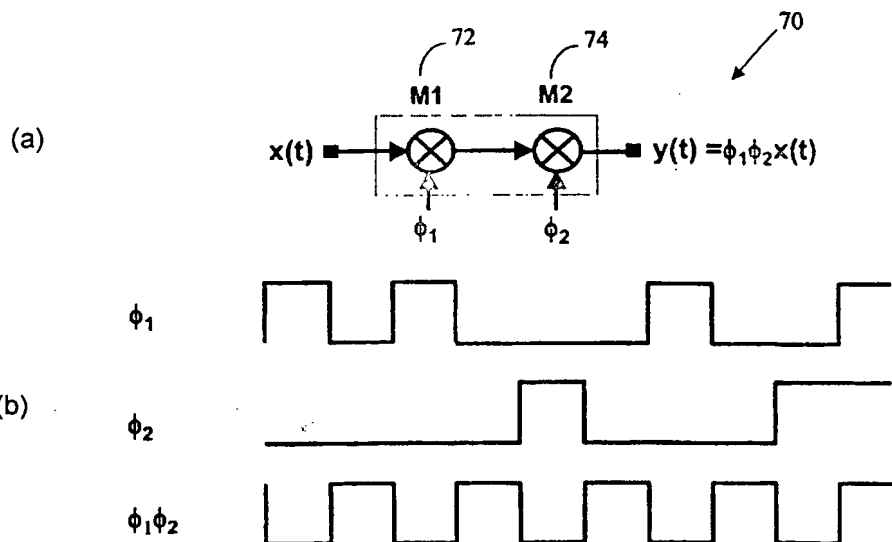
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(54) Title: IMPROVED METHOD AND APPARATUS FOR DOWN-CONVERSION OF RADIO FREQUENCY (RF) SIGNALS



(57) Abstract: This patent describes a method of removing the LO-leakage and 1/f noise problems associated with direct conversion RF receivers and other demodulators. In order to solve this problem a virtual LOTM signal is generated within the RF signal path which is tuned to the incoming RF signal. The virtual local oscillator (VLO) signal is constructed using signals that do not contain a significant amount of power (or no power at all) at the LO frequency. Any errors in generating the virtual LO signal are minimized using a closed loop correction scheme.

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